

I claim:

1. An improved composition for whitening a tooth surface, which composition comprises:
  - (a) a stable high pH primer solution itself comprising hypochlorite having a pH greater than about 8.5 to about 13; and
  - (b) a tooth whitening composition itself comprising peroxide; wherein component (a) and component (b) are contacted with each other on and comprise an active composition on said surface of a tooth.
- 10 2. The improved composition of Claim 1 wherein in step (a) the primer has a pH of between about 8.5 and 12.
- 15 3. The improved composition of Claim 1 wherein the hypochlorite is selected from the group consisting of sodium hypochlorite, potassium hypochlorite, calcium hypochlorite, barium hypochlorite and combinations thereof.
- 20 4. The improved composition of Claim 1 wherein the peroxide is selected from the group consisting of hydrogen peroxide, sodium peroxide, potassium peroxide, carbamide peroxide, sodium perborate, sodium percarbonate and combinations thereof.
- 25 5. The improved composition of Claim 1 wherein the peroxide is hydrogen peroxide.
6. The improved composition of Claim 1 wherein the hypochlorite is sodium hypochlorite.

- 30 7. An improved method for whitening the surface of a tooth, which method comprises:
  - (a) contacting the surface of a tooth with a stable high pH primer

solution itself comprising hypochlorite having a pH greater than about 8.5 to about 13;

- (b) contacting the pH primer solution on the surface of the tooth with a tooth whitening composition itself comprising peroxide; and
- (c) removing after an appropriate contact and reaction time, said pH primer solution and said tooth whitening composition.

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8. The improved method of Claim 7 wherein:

in step (a) the hypochlorite is selected from the group consisting of sodium hypochlorite, potassium hypochlorite, calcium hypochlorite, barium hypochlorite and combinations thereof.

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9. The improved method of Claim 7 wherein:

in step (b) the peroxide is selected from hydrogen peroxide, sodium peroxide, potassium peroxide, carbamide peroxide, sodium perborate, sodium percarbonate and combinations thereof.

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10. The improved method of Claim 7 wherein the peroxide comprises hydrogen peroxide.

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11. The improved method of Claim 7 wherein the hypochlorite comprises sodium hypochlorite.

12. The improved method of Claim 7 wherein the method further includes:

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(a1) contacting,

- (i) before step (a) or
- (ii) between step (a) and step (b),

the tooth surface and the applied pH primer solution with an aqueous, foam or gel fluoride dental treatment composition, and

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(b1) after step (b), removing said fluoride dental treatment composition separately or concurrently in step (c).

13. The improved method of Claim 12 wherein:

in step (a) the hypochlorite is selected from the group consisting of sodium hypochlorite, potassium hypochlorite, calcium hypochlorite, barium hypochlorite and combinations thereof;

in step (a1) the fluoride composition is applied between step (a) and 5 (b); and

in step (b) the peroxide is selected from the group consisting of hydrogen peroxide, sodium peroxide, potassium peroxide, carbamide peroxide and combinations thereof.

10 14. A kit for the improved whitening of tooth, which kit comprises:

- (a) a composition of a stable high pH primer-whitener solution itself comprising hypochlorite having a pH of greater than about 8.5 up to about 13,
- (b) means for applying said primer-whitener solution to the surface of said tooth; and
- (c) instructions describing said improved tooth whitening process.

15 15. The kit of Claim 14 which further includes:

- (a) a second tooth whitening composition itself comprising a peroxide, and
- (b) means for applying said second tooth whitening composition to said tooth.

20 16. A kit for improved whitening of a tooth, which kit comprises:

- (a) a composition of a stable high pH primer solution itself comprising hypochlorite having a pH of greater than about 8.5 up to about 13;
- (b) means for applying said pH primer solution to the surface of said tooth;
- (c) a tooth whitening composition itself comprising a peroxide;
- (d) means for applying said tooth whitening composition to said tooth;
- (e) optionally a dental fluoride treatment composition;
- (f) optionally means for applying said optional dental fluoride treatment

composition to the surface of said tooth; and

- (g) instructions describing said improved tooth whitening process.

17. The kit of Claim 16 wherein:

components (e) and (f) are not present.

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18. The kit of Claim 16 wherein components (e) and (f) are present.

19. An improved method for diagnosis and determination of tooth whitening options, which method comprises

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- (a) performing the tooth whitening of Claim 67;
- (b) evaluating the results of step (a); and
- (c) providing specific tooth whitening treatment options to the patient.

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20. The improved method of Claim 19 wherein the step (c) the treatment options include stopping tooth whitening treatments, chair side power tooth whitening, custom fabricate a tray-and-gel, tray and gel strip, supervised at-home methods and over-the-counter kits.

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21. An improved composition for whitening a tooth surface, which composition comprises:

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- (a) a stable high pH primer solution itself comprising hypochlorite having a pH greater than about 8.5 to about 13 which is present in a concentration of between about 0.1 and 5 weight % of the total composition; and
- (b) a flavoring agent in the amount of between about 0.001 and 5% by weight of the total composition; and are mixed with each other and comprise an active composition on said surface of a tooth.

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22. The improved composition of Claim 21 wherein the flavoring agent is selected from the group consisting of, but is not limited to mint, oil of wintergreen, oil of peppermint, oil of spearmint, clove bud oil, menthol,

anethole, methyl salicylate, eucalyptol, cassia, 1-menthyl acetate, sage, eugenol, parsley oil, oxanone, alpha-irisone, marjoram, lemon, orange, propenyl guaethol, cinnamon, vanillin, thymol, linalool, cinnamaldehyde glycerol acetal, and mixtures thereof.